

Faculti Summary

<https://faculti.net/flood-vulnerability-and-risk-assessment-of-urban-traditional-buildings/>

This video discusses the increasing risk of flooding in Southeast Asian cities, particularly Malaysia, over the last decade. It highlights that flooding is a result of both environmental factors, such as climate change and extreme weather events, and human activities, like urbanization and deforestation. In Malaysia, floods account for 98% of the country's average annual disaster losses. The study specifically examines Kuala Lumpur, focusing on the effectiveness of the city's flood management strategies, including a significant infrastructure project known as the Storm Water Management and Road Tunnel (SMART).

Despite these efforts, flooding persists, especially in the historic city center due to its vulnerability. The study adopts a comprehensive approach to assess flood resilience by examining the vulnerability of residential buildings, particularly historical ones, and their environmental context. Key factors include building materials, height, drainage systems, and neighborhood characteristics.

The research employs a risk assessment methodology that combines data on building vulnerability with flood mapping to evaluate economic losses. It finds that localized flooding affects a smaller number of buildings and suggests that improvements in drainage could significantly reduce flood impacts. The conclusions emphasize the need for targeted, localized studies to understand flooding dynamics better and integrate natural defenses with traditional engineering solutions for effective flood risk management.